



UNIVERSITY
OF MANITOBA

Blueprint for Pharmacy: Educational Activities at the University of Manitoba

Faculty of Pharmacy, University of Manitoba, Winnipeg, Canada



Curriculum Mapping

The Faculty of Pharmacy at the University of Manitoba has engaged in a mapping exercise with the purpose of creating an on-going process that can facilitate curriculum documentation and development between accreditation cycles. With the input of the University Teaching Services, the Faculty took the approach of aligning each course's learning objectives with the national educational outcomes for Pharmacy. The course objectives were also supplemented by the assessment of learning levels expected at the completion of the course. The levels were described according to the ICE (Ideas, connections, extensions) scale¹ and the student performance levels were defined as novice, functional or competent. Two versions of the map were constructed:

- student-centered (learning through course objectives by year)
- educational outcome centered for curriculum evaluation

Figure 1 and Table 1 illustrate examples of how an educational outcome is linked to all courses with objectives applicable to the outcome and how specific course objectives (with learning and performance levels) fulfill individual educational outcomes.

The Faculty is now beginning curriculum evaluation to document course integration and longitudinal learning progression.

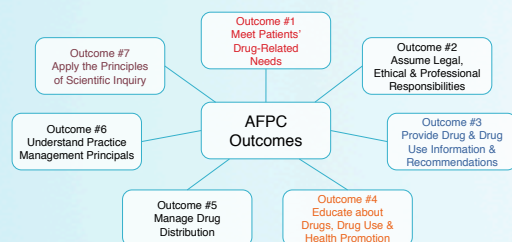


Figure 1. AFPC Outcomes

Objectives	LL	Outcomes	PL
1 Demonstrate the ability to systematically collect and analyze pertinent patient information to identify or prevent one or more drug-related issues or to address a drug information need.	E	1.1 Develop Relationship 1.2 Determine Needs and Outcomes 1.3 Identify Drug-Related-Problems 3.1 Identify Needs for Information 4.1 Identify Needs for Education	F F N F F
2 Demonstrate the ability to prioritize and resolve a patient's drug-related issue(s) or to address his/her drug information needs. This may require activation and integration of existing knowledge and/or using an appropriate drug information search strategy to gather and synthesize existing/emerging evidence.	E	1.3 Identify Drug-Related-Problems 1.4 Develop Plans 3.2 Respond to Needs 7.1 Apply Scientific Inquiry 7.2 Use Research Results in Practice	F N N N N
3 Develop and document the care plan using a concise, standardized process (data, assessment, intervention and monitoring plan).	E	1.4 Develop Plans 1.8 Document Outcomes	N N
4 Identify various options of referral.	C	1.5 Refer	N
5 Communicate and collaborate effectively with patients and physicians to ensure resolution of the drug-related issue(s) or drug information needs.	E	1.6 Implement Plans 4.1 Identify Needs for Education 4.2 Develop Education Plan	N F F
6 Through effective communication and demonstration, educate patients on the use of various diagnostic tools.	C	1.1 Develop Relationship 4.1 Identify Needs for Education 4.2 Develop Education Plan	F F F
7 Collaborate and communicate with peers as a means of acquiring new therapeutic knowledge and problem solving skills, and developing interpersonal skills.	C	1. Meet Patients' Drug-Related Needs *There are no outcomes related to collaboration or interprofessional collaboration.	F

LL = Learning Level PL = Performance Level C = Connections E = Extensions N = Novice F = Functional

Table 1. PHRM 3100 – Skills Lab 3

Interprofessional Education (IPE) Initiative

Mission²: To graduate health professionals prepared to manage and adapt processes in interprofessional (IP) teams necessary to achieve person- and family-centred health and wellness outcomes.

Vision²: Improved health and well-being for Manitobans by building a culture of interprofessional education at the University of Manitoba.

Participating Faculties: Dentistry, Human Ecology, Kinesiology and Leisure Studies, Medicine and Clinical Health Psychology, Nursing, Pharmacy, Social Work, Dental Hygiene, Medical Rehabilitation

Partners: the Public, Winnipeg Regional Health Authority, Regional Health Authorities of Manitoba, Professional Regulatory Bodies in Manitoba, Professional Associations in Manitoba, Manitoba Health (Health Human Resources), Manitoba Government (Advanced Education – Council of Post Secondary Education), other health professional education programs in post secondary institutions in Manitoba, other IPE university programs across Canada

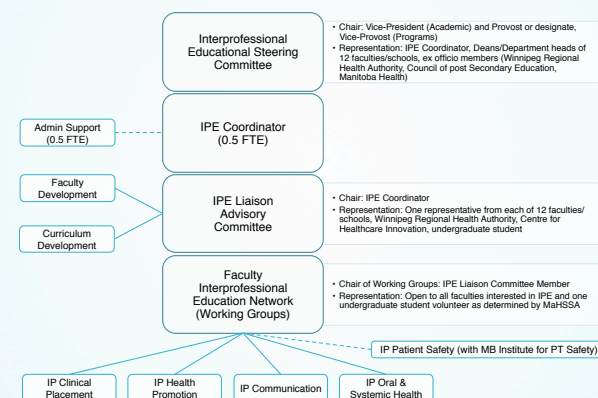


Figure 2. U of M Interprofessional Initiative Organizational Structure

Approved IP educational strategies:

- Clinical placements
- Case based learning
- Early learner IP opportunity

Priority learning subject areas:

- Social determinants of health
- Chronic disease prevention & management
- Oral & systemic health
- Patient safety & quality improvement
- Health education

Blueprint Key Action Promote and increase interprofessional and intraprofessional approaches to education and training to ensure optimal patient-centred care in an integrated health care environment.³

Blueprint for the Development of an IPE Curriculum:

- Designed to guide and monitor the implementation of IP learning opportunities within the U of M.
- As IP learning opportunities are developed, an expectation is that each 'session' or 'module' will address one or more of the collaborative competencies by explicitly stating and incorporating relevant learning objectives.
- Modeled against the British Columbia⁴ and the Canadian Interprofessional Health Collaborative⁵ Collaborative Competency Frameworks (with permission).

Structured Practical Experiential Program (SPEP): Alternative Sites

The SPEP program at the University of Manitoba has always been a traditional program where students would complete their rotations in either a community pharmacy or hospital setting. The challenge of finding available hospital sites in Winnipeg, combined with a decrease in the number of sites available has created an opportunity for non-traditional sites. Fourth year students not interested in pursuing a career in hospital pharmacy choose to do a rotation in a community pharmacy as well as in one of our alternative sites. In the 2009-2010 academic year, 7 students completed rotations in alternative sites:

- One site was a diabetic clinic where students were paired with a Clinical Pharmacist specializing in Diabetes. Students have the opportunity to work in an outpatient clinical setting and apply the knowledge learned in the classroom to "real" patients.
- Another rotation was offered in a community pharmacy with a focus on management. Students completed a number of tasks including a loss prevention audit, a pharmacy standards checklist, an update of the policy and procedure manual as well as interpretation of weekly store reports.

Electives Program – PHRM4800

This project-based course, implemented in the academic year 2006-2007, was developed to provide senior pharmacy students with opportunities for self-directed learning in areas of basic and clinical research, professional practice and education that are beyond the boundaries of the required undergraduate curriculum. Students have the option of applying to conduct projects at sites pre-approved by the Faculty or to propose alternative sites. All project proposals need to be approved by the Faculty. Student assessment (Pass/Fail) is based on the evaluation of student performance by the preceptor and the grading of the student written report submitted to the Faculty at the end of the 7-week time block.

The program has been successful in placing students at sites within the city of Winnipeg and the province of Manitoba, but also outside the province and outside the country. Some students conducted projects at universities and hospitals in Australia, Germany, Serbia and the UK, while others opted to volunteer in developing countries as far away as Nepal and Vietnam. The number of pre-approved options has grown from 52 to 75 in the three years since implementation of the program.

Research and Graduate Program

The Faculty of Pharmacy at the University of Manitoba has three established research groups:

- Drug disposition and discovery (rational design of novel compounds, treatment options for various diseases, nutraceutical products and transdermal research)
- Antibiotic resistance (in vitro and clinical research, application of antibiotic PD to the prevention and treatment of infectious diseases)
- Drug use and effectiveness (population-based studies on the appropriateness of medication use and evaluation of adverse events)

Research funding comes from a variety of sources including the Canadian Institutes for Health Research, the Natural Sciences and Engineering Research Council of Canada and the Manitoba Health Research Council. National and international collaborations take place including the University of British Columbia, the University of Saskatchewan, the University of Pittsburgh, the State University of Ghent, the Johns Hopkins University, the University of Queensland and the China-Japan Friendship Hospital in Beijing.

References

- Fostaty Young, S. & Wilson, R.J. (2000). Assessment and learning: The ICE approach. Winnipeg, Portage and Main Press.
- University of Manitoba Interprofessional Education Liaison Advisory Committee. University of Manitoba Interprofessional Initiative: Strategic Plan. (Draft February 2010)
- Task Force on a Blueprint for Pharmacy. Blueprint for pharmacy: implementation plan. Ottawa (ON), Canadian Pharmacists Association: 2009.
- The UoM IPE Liaison Committee agreed to adapt the British Columbia Competency Framework for Interprofessional Collaboration, with permission.
- The UoM IPE Liaison Committee agreed to adapt the Canadian Interprofessional Health Collaborative (CIHC) Collaborative Competency Framework, permission pending.